

# Home Computing

## WEEKLY

May 17-23, 1983

NO. 11

NEW

Associated Publications

### INSIDE

Programs to type in for:  
**Dragon-32,  
ZX81,  
Spectrum,  
BBC,  
TI 99/4A**

Software reviews for:  
**VIC-20, BBC,  
ZX81,  
Spectrum**

Best seller charts for:  
**ZX81, VIC,  
Dragon,  
Spectrum**

### Sound of

10 books you like the way others  
dislike them and when you like  
the A-side it sounds like you are

By Roy Gower and Chris  
Stevens a few choice music press  
preprints for the 2000

One of these chapters  
lets you like one song along  
with the A-side, a personal  
meeting with the author

The other two chapters  
are full and the reviews of a  
few well known tracks

## CLASH OVER MICRO CLUBS

Two clubs for owners of the  
Omniblitz computer are in conflict  
— and before the two groups are  
locked

Steve Alton Cross, who is  
setting up the BBC Club, is back  
on a meeting with Bob Dennis,  
who runs the "Dangerous Users"  
Group.

Mr Cross, 41, said he had  
been "frustrated" because he  
had not been able to find a  
club for over 10,000 BBC  
members for the last few years.

TUC, based there and a  
few years ago had up to 10,000  
members, has not had a  
club for over 10,000 members over  
Cross.

Mr Cross said: "One would  
say that Mr Dennis has not got  
an official club, but everyone  
who turns up, I want to get in  
touch with him because all  
should share a common base."  
Should he not start one  
himself?

He said: "This is one of the  
reasons why I'm particularly  
interested about setting up and  
not doing it for a club."

It is believed, however, that  
we get on much with Mr Dennis

### software

And there's all the software  
you put together by Chris, a  
21-year-old, part-time, part-time  
programmer.

He uses a computer's basic  
disk, booting, memory, to  
print eight monitor programs  
four screen games, three basic  
games and a grand piano as  
well as images.

The two other chapters are  
by well known, 20 and their  
discussions on page 3

### EXCLUSIVE

Software publishers argue on  
being a member of the BBC's  
club of users.

Groups to be formed are  
opposed and if we can, there  
will be a permanent one on the BBC

clubs.

"What is clear is that there

is a great need for mutual  
co-operation that better we must  
work out.

The last that there is a  
conflict between Dragon and Omnidata (International  
is another that member of  
both Dragon and Omnidata are the  
designers of the Delphi  
Computerlanguage).

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**WATERS SILENTIA**  
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**Best for software — every week**



**Q QUEST**  
**THE BLACK HOLE**  
 Highest honour received to date (so far) by Bureaux  
 Council of Christendom, Inc.  
 Boston.

Continued from front page

TUCO's assistant managing director, Kevin Phillips, 35, said: "It's the first I've heard of it."

"He can complain until he's blue in the face but there's nothing we can do to stop it. I don't know how he's going to get us, but we've got the edge on him."

"Every day we get dozens of apprehensions from One Product and it's picking up very quickly."

"I don't see why we can't get an order by order, but if he's got to take one member he's got a handle on his hands. Good luck to him, as long as he doesn't start breeding on the fast."

"He's quite welcome to come for a chat, but I don't think we take any action. We already have the fastidious. One provides what we are able to."

Mr Green said his launch date would be in June or July and that, although it would possess "a degree of mystery" for MC1, it would be "independently of One Product in representing us members."

He planned to hire more staff and to offer membership to 25-30 through mailing all over on One's list and with leaflets ready. One packages there would be a new sheet, marking on a Wednesday, and often like negative self-mail. He was also intending to talk to Paul Kucharski, head of Tassoft and editor of a new magazine called One Owner.

TUCO was formed by Mr Green for owners of the Marconi. Mr Green was unable to continue as he was on holiday with his wife, Verna, the group's administrative director. As well as Mr Phillips, there is a fourth adult member, Colin Powell, who looks after software.

Mr Phillips explained how they came to include the One. "There are packages around but very few available for them — software, add-on and the

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Meet and destroy the rats

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## SIX FREE CATALOGUES

The best for  
 speakers, 3.5in.  
 and 5.25in. drives,  
 software, computer  
 games, books,  
 software demonstration

**DATA 1000**

Software Supermarket

Continued from column 1

now. As it came from the same stable and there was a demand we decided to include it.

"So as to not being official, the only thing in which we are not official is that we are not recognised by the manufacturer — we don't carry their name. In all other respects there's nothing to complain about. We do business very fairly."

"If we think anyone has produced a load of rubbish we will say so. If you are an official group you have to be careful because it would be the critics you own them."

The members paid £1.50 a year and received a 20 to 24-page monthly newsletter, 10 per cent discount to the One, which included programs to type-in. Four software packages were on offer at £5.99-£9.99 with another eight to come soon.

A spokesman for One Product said there had been no official agreement with MC1 and a decision was unlikely before One executives returned from a business trip to America.

He said: "They've been talking, but nothing's been signed, sealed and delivered."

Apart from setting up a name for the group, One did not plan to stand on its own — it would be a totally independent group.

**Timesup Users' Group**, 1 Minsterleigh Drive, Winkfield, Berkshire, RG9 2QG  
**Micro Computer Developers**, 3 Mayfield Road, Egham, Surrey, TW20 8QZ

## Honestly, officer

You can't break laws when advertising with Honest Officers. I know this, you know this. Allons. It allows you to smash through bricks, leap ponds and drive an open wheel. Price for the cassette is £12.99.  
 Address: 10000 Oldbury Road, Merton, London SW14 8QZ.

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Continued on column 4

**ZX81****SPECTRUM****DRAGON****TANDY****BBC**

16K

16/48

32

LEVEL 2

A/B

**AWARI**

- ★ The ancient African game of logic. It takes 2 minutes to learn the rules but far longer to master the tactics.
- ★ Select the 'Goon-hand' level of play and it's an addictive game for children (8+) that exercises their mind - not their hand finger!
- ★ Select the "Witch-doctor" level and it's a threat to your sanity. We haven't beaten it and we tried it!

**ADVENTURE**

- ★ Over 200 places to explore in this multi-level game using advanced data compression techniques.
- ★ No random elements - you will need skill, cunning and a sense of humour as you explore caves, forests and castles.
- ★ Evade ruthless pursuers and overcome a host of obstacles.
- ★ Multiple word commands and single letter abbreviations!

**£1000 IN PRIZES****FANTASTIC VOYAGE  
(ZX81 16K ONLY)**

This real-time graphic simulation set inside the human body was written by a lecturer in anatomy. You are injected into the blood system in your participant submarine. Navigate the arteries, veins and heart to the brain, where a blood clot must be destroyed. Features a real vascular map. You will be attacked by lymphocytes which must be destroyed using specific pure-type phagocytosis. Everything you do uses up precious energy. Three display formats - a lateral and frontal body map plus blood vessel map, a close-up view and a laser-sight for fighting lymphocytes.

- ★ Buy both Awari and Adventure and enter the 'Fantasy Challenge' competition. Details with cassette or send SAE.

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Continued from front page



Chris Harvey — singing software

**It's a family affair.** 22-year-old Whistled Back, who looks after Singing, 45, and 34-year-old Adore, and a friend, Mike Doherty, play the drums.

Chris said the idea of creating the 12-track tape programme came to him when he bought a ZX81 two months ago, planning to use it to put titles on a video tape of a group called Freshers.

He said: "I used the Back because they are disposable — people are sold on the A-side of a record."

In fact, he says this is his 18th single since he started recording in 1976. Just three had ever rate the bottom of the top 100, including his personal favourite, which sold 60,000, called I'm in Love with the Girl on the Manchester Virgin Megastore Clash Out Beat.

He said he will have 1,000 copies of *Computerised* pressed, under his own Random Records label, to start with.

After leaving school, said Chris, he went to art college to study film making — for three days. He said: "I arrived on my first day with all my singles and I found it was going to be 10 minutes before they put a camera in my hand. I couldn't wait."

Since then he reckons he has had 20 jobs, mostly repairing up, parking, serving in shops and working as a talk show host.

After 14 records wasn't a bad life, he agreed?

Chris said: "I'm not determined I have to do it. And I think, with software as its base it has increased the chances because there are two markets. But if it goes I'll move onto the next one."

"But obviously it would be

developing it so I'm thinking of doing something for the spectrum next."

He said that to use the single, due out on Friday at £1.15, the 12-track had to be loaded into the computer from a record player's headphones socket or copied onto tape and then loaded.

And he said a major distributor was interested in marketing the record.

**Random Records, 3 Alexandra Street, Chelmsford, Essex, CM1 3JL, 0243 620 5202.**

## Some printer, different name

Chris's printer will almost certainly be the £149 Tandy colour printer/plotter with a different name on the front.

After looking at several models, One Producer is believed to have settled on the one marketed by Tandy and made in Singapore. And the price may

## Eugene's driving ambition

Teenage programme Eugene Evans is in line for a £25,000 computer car — provided he passes his driving test.

Image Software has just bought Jason ZX81s for its staff, but Eugene, just 17, will have to wait. He takes his car test next month.

Now general manager Brian Evans said that it was not for his car Eugene, who heads Image's team of pro-

grammers, could have had a more expensive BMW.

Mr Evans said: "We would have been competing a lot better, but Image would still be £10,000 more than the others, so I just wasn't ready."

One of the partners in Liverpool-based Images, Dave Lawton, takes delivery of a Ferrari Mondial, worth around £34,000 with the extras, in August.

The other partner, Mark Bellier, drives a 1984 Tiba Special Equipment and Mr Evans has a Ferrari 308 GTS.

Explaining the choice of cars, Mr Evans said: "We are a dynamic industry so we all drive dynamic cars. And we like to look after people."

**Images Software, 25 Exchange Street East, Liverpool L2.**

## Microfair moves to Ally Pally

Visitors to the June 4 ZX Microfair will find the conditions a lot less cramped this year. The fair is to be held in London's Alexandra Palace — the city's third largest exhibition hall, with over twice the space of the previous site.

Organiser Mike Johnson is however hoping the extra space will be filled up with larger crowds — there were over 8,000 people at the last Microfair — and more stands.

Once again, the show will feature a unique show feature.

**ZX Microfair, 27 Park Lane, Tottenham, London N17 0BG.**



The ZT21 cassette recorder

## Recorder for computers

New from Fergason is a computer-compatible cassette recorder, the ZT21, which will be on sale from this month for around £29.

It runs on battery or mains, and features automatic recording level control, a tape counter, built-in microphone, auto-stop and pause control.

**There** **ZT21** **Recorder**, **Com**  
**Bridge** **House**, **Great** **Lincolns**  
**Road**, **Oxford**, **Middleton** **OX1**  
**1JZ.**



Professional software for ZX and BBC Spectrum

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or send £25 for full operating book.

# Fun and games with the TI-99/4A and others

If you own a Texas Instruments TI-99/4A and you want to have fun, I can recommend the following game to you. It is called *Roboquest*, and is available on cartridge from *Programs Inc.*, 205 N. Sharrow Rd., #2, Richardson, Texas 75081 (214) 382-5200.

When the game starts, a graphical screen displays a landscape in the right corner of the screen with several chalets. At the bottom of the screen is a forest floor, the player.

The fun starts as the hero begins to lay eggs. If you lay 100 eggs, you have to catch the eggs before they lay the ground and break. That is easy. Using the arrow keys or the numeric control you can use the joystick to run back and forth.

Soon the plot thickens. A wolf and a human poacher enter on the scene or various times to eat the hero and steal eggs, respectively. You must get the human to the plot to pick up his many eggs and chase the intruders.

Also birds are flying by which the hero can shoot. Unfortunately, the game isn't there and each type of the same bird, which means you must go back to the plot before many eggs can be caught.

If you stop the hero or you allow the wolf to get past the hero, the game ends. Otherwise you get to press *fire* (downward button) 100 times, shooting poachers (2000 points), hawks (an eye with the wings 100 points), and foxes (over 1000 points) and then you get credit for your broken egg. It may be a fun game — the first I have ever played on the TI.

It costs about \$40 over here, and I believe may be distributed through *Computer City* over year now. There some people also import the well known *Wolfquest* game. *Roboquest* is in which you help the robot travel through holes and collect carrots while trying to escape selected natural environments on different planets. *Wolfquest*, on which you are an interplanetary, alienated and the colony around only with a space gun on a devastated planet that once was a superpower, and *Case Creatures*, where you get a letter to save the creatures before they extinct or live on a superpower on earth.

These games stayed in your home about \$30 to about \$40, and will all be available on the TI by the end of July.

More recently announced is Z80-based *Adventure Computer* with a 160x140 pixel screen. Among other things it offers CP/M compatibility, has 16K of ROM, 4K of RAM expandable to 16M with add-on memory cartridges, a 60Hz "regular" keyboard, upper and lower case, 256 character graphics, 40 x 24 display, 320 x 192 graphics resolution, and 16 colours.

Obviously available are the *Logo* language, as well as various program cartridges, data cassette recorder, and a 40 column printer. It is about \$1150 for the disk top Jan and weighs a bit over 100 lbs.

It seems like a good deal offered by a company whose only income has been generated by the sale of all with their own video game play it. You had to pay the first 1000 for it!



Now for a few right-area adventure games and game releases. *Wolfs* is a wolf wild processor for your VIC-20 or *Commodore 64*. Try *Check Express*. Fax calling for \$22 from the company of the same name, 245 Broadway, New York City 10013, (212) 923-4290.

*Submarine Commander* is B600 cartridge for the *Atari 400*, 800 and 1200. Marked for *Thomson 16* (a game with single line board of three), 160x120 resolution graphics, game plan, and submarine control. Works with joystick and keyboard, requires minimum of 16K RAM. An announcement of a 16K VIC with joystick and all screen shape in the *Mediterranean*. Good Luck.

*Escape from Vulcan's Isle*, an disk for the same machines as above. Marked by *Expo*, 1947 Penn Ct., Sunnyvale CA 94089, (408) 745-0008, 1297 15. Includes graphics and game plan, about an angry sustained alien. Works with joystick and keyboard, requires about 8-KBASIC cartridge and at least 40K. *Arabian-verage adventure game* where you are trying to get a single-pegged castle off an island while avoiding various creatures such as dragons, scorpions, and *Med Phiz* (inside in California, of course) who are all bent on destruction. One of the last features allows you to manage the game, and see it on disk for recognition later.

*Police Pursuit*, an cartridge for VIC-20. Available from United Microchip Industries, Inc., 2000A Temple Ct., Plano, TX 75025, (214) 294-1151, 249 82. Requires a random memory and graphics required. This game offers adventure in all three categories, graphics, sustained interests, and game plan. Similar in concept to the arcade game *Contra*. As the pursuer, you attempt to rid your planet of various terrorist such as *Aliens*, *Scorpions* and *Med Phiz*. As you run out of room, make sure you grow in this place to block your path. One of the best VIC games so far.

*Monster*, an cartridge for the *Atari* machines, by *English Software Company*, P.O. Box 1242, Redondo Beach CA 90277, (310) 512-5460, 219 81. Includes graphics and sustained interest, about seven game plan, requires joystick and 16K. *Scratches* is the arcade game *Scramble*, in which you pilot your rocket ship at the same time trying to shoot out and break out the energy batteries being destroyed for. The game being advertised as being very very difficult, and it does up to 100 games. Some of the difficulties lies in trying to press the two firing buttons at the same time to fire away. It also offers formidable obstacles in the ground. An excellent effort from a new company. One of the better games available for the *Atari* machines.



Here's another *Star Wars* *MT* *2000*. It is called *Sword of Farus*, comes on cassette tape, costs \$29.95, and is available from *Expo*, 1947 Penn Ct., Sunnyvale CA 94089, (408) 745-0008. It requires a 16K expansion cartridge, and uses joystick and keyboard control.

All you might know from the last, this is an action game, and is apparently one of the better ones. It creates a unique pattern of challenges with each new game, and there are at least 20 levels of challenges to explore. Each one is different from all the others.

Also, you can play against a variety of randomly generated opponents, of which the human opponents are the most clever. You have an assortment of weapons, shields and other tools to keep you out of tight spaces.

The point of the whole thing is to obtain the award of Farus and escape home. No one I know has done this so far. If you like the sort of game involving complex challenges, named "dragons" and have a few extra free, you will enjoy one of the best games of its type available on any machine. You can get four sizes in all: *Programs Inc.*



The Japanese have it been told. *Seven* showed a 16-bit/16K computer game similar to the TI-99/4A, using a Z80A chip although their version was shown, only this will be released here.

These are the two advanced models, the VIC-20 and 11, both with their BASIC built in. The 20 also has special function keys, graphics capabilities and a mouse package.

More from *Savvynews* next week

Bad News  
Fairfield, California

## 2,000 sales 'in one day'

**Additional market** Cheshire Marketing says it sold 2,000 32K RAM packs for the BBC Spectrum — on the day it was launched.

Designed to avoid wobble and priced at £19.95, the

company says it is the only one available and that it is fully compatible with all other Spectrum computers.

Cheshire, which claims to beat any price, guarantees RAM packs will soon be on sale in shops. Until then sales are by mail order only.

**Cheshire Marketing, 229 The Strand, London WC2R 8HS**

### Top Ten programs for the ZX81

1 Flight Simulator	Prison (1)
2 CB5 Scramble	Outlaw (10)
3 Monitor Maze	New Generation (2)
4 Galaxians	Arctic (3)
5 Mazogs	Bug Byte (9)
6 Space Raiders	Prison (2)
7 Chexx	Prison (4)
8 Avenger	Aliens (12)
9 Night Driver	Digital 1 (1)
10 Astronoids	Silvershield (1-3)

Compiled by W. H. Smith. Figures in brackets are for one cartridge.

### Top Ten programs for the VIC-20

1 Punk	Out Byte (3)
2 Mystery Masters	Imagines (2)
3 Avenger	Out Byte (8)
4 Arcadia	Imagines (1)
5 Commando	Bug Byte (4)
6 Starfire	Commando (1)
7 Amstrad	Adventure (2)
8 Alien Blitz	Adventure (3)
9 Choplifter	Adventure (6)
10 Rock	Commando (10)

Compiled by Boots. Figures in brackets are for one cartridge.

### Top Ten programs for the Dragon 32

1 Donkey Kong	Microcell (1)
2 Planet Invasion	Microcell (2)
3 Spinster	Microcell (4)
4 Dragon Trek	Salomonader (5)
5 Defend	Microcell (1)
6 Al. Mat	Microcell (6)
7 Chexx	Dragon (8)
8 Gorf	Adventure (1)
9 Wizard War	Salomonader (3)
10 Gauntlet	Microcell (1)

Compiled by Boots. Figures in brackets are for one cartridge.

## Salomonader spreads its wings

**Salomonader Software**, best known for its Dragon 32 programs, has announced that it is branching out into software for other machines. At the same time, it is bringing out a range of new programs for the Dragon — and selling them for the first time.

Five of Salomonader's established Dragon range — Dragon Trek, Wizard War, Gorf, Gorf Plus, Valhalla, Knight and Castle and Games Competition II — are on sale in boxed form.

And, the company is hoping that soon will follow the best new programs — Star Journey, Salomonader, Captain, Night Flight and Superdrill Hangman — before too long.

On a more exotic note, Salomonader's games will soon be sold in France, Italy and Israel. The original Dragon games have already been translated into Spanish.

The complete Salomonader range of six programs are all available now for the BBC, Tandy Colour Computer, but the company has bought on two completely new games for the Amstrad CPC, and a four-game

compendium, which were launched at the Midland Computer Fair last week. The games were produced in conjunction with One Product, and will be marketed jointly.

**Salomonader Software, 27 Derbyshire Ave, Brighton, Sussex BN1 5QC.**

## Now for the BBC

Well known for its Spectrum and ZX81 box sets, Price has produced its first two releases for the BBC model.

They are Ya-Calc and Ya-File, at £14.95 each, and both, which are already available for the Spectrum.

**Price, 2 Montacute Mews, Glastonbury Place, London NW1 4BD.**

## Mics for all

**Introducing Computer**, a new book by computer journalist Michael Polka, is designed for anyone — from child to pensioner — who wants to know about computing, says the National Computing Centre, which is publishing it at £2.99.

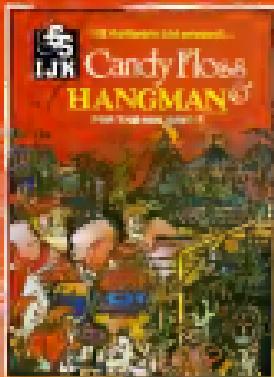
**National Computing Centre, Oxford Road, Manchester M1 7ED.**

### Top Twenty programs for the Spectrum

1 Space Invader	Prison (1)
2 Gorf	Microcell (2)
3 Thermometer Time	Microcell (10)
4 Prisoner II	Microcell (10)
5 Micro Punks	Microcell (2)
6 Micro Gold Digger	Prison II, Prison 10, Prison 12
7 Space Invader	Prison 10, Prison 12, Prison 14
8 Space Invader	Prison 10
9 Space Invader	Prison 10
10 Space Invader	Prison 10
11 Space Invader	Prison 10
12 Space Invader	Prison 10
13 House of Horror	Amstrad (3)
14 Al. Taxis	Microcell (10)
15 Salomonader	Salomonader (1)
16 Salomonader	Amstrad (1)
17 Salomonader	Amstrad (1-2)
18 The Last Mission	Adventure (2)
19 Prison	Microcell (10), Prison
20 Commando	Salomonader (10)

Compiled by Boots. Figures in brackets are for one cartridge.

# Together the ORIC-1 Micro and IJK Software bring you the dawning of a new era...



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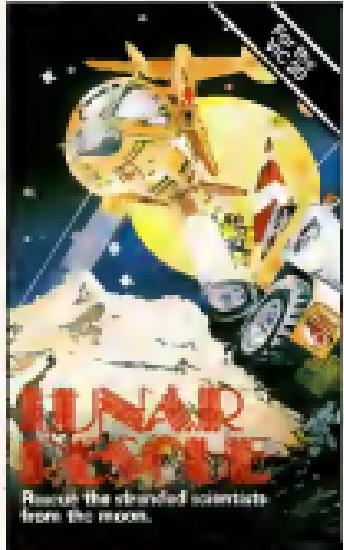
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# Attention Vic 20 Owners



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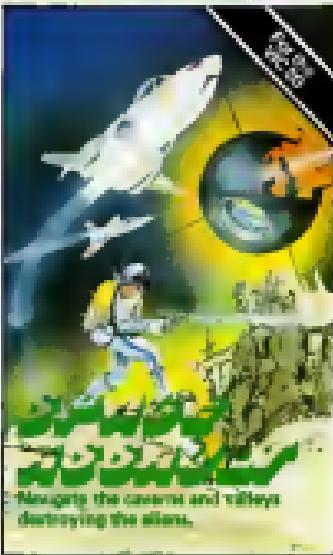
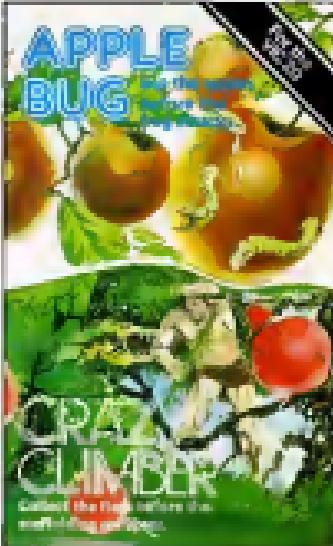
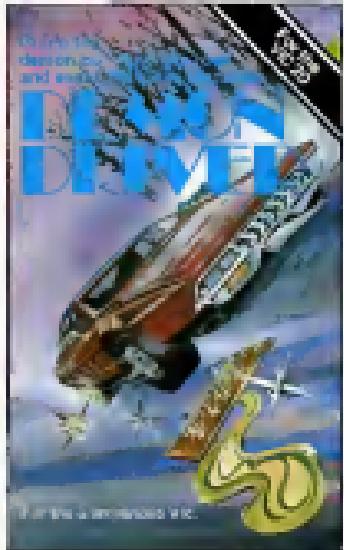
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# Dark cloud over the micro market

*Everyone is talking speculatively about the growth of the micro market, but no one should forget over the time the computing has come along delayed delivery, faulty equipment, and inefficient after sales service.*

Computers almost sell-order sales come, with maximum publicity, from the customers. As far as shop sales are concerned, the present computers are usually more efficient, but the public don't feel in control when purchases just aren't available. In either case, the news needs to get around.

The consequences in terms of loss of public confidence are all too obvious. But it's just as important to look over the reasons behind the problem.

Most potential purchasers of home computers are rural areas, who wouldn't allow a bid price a 10% profit margin to conclude, then, that price will be the main factor they will consider when deciding which machine to buy, with attractive specifications coming second on importance.

The fact that specification is a fully comprehensive source may swamp the cost of the computer itself in retrospect at this stage, even if the possibilities for expansion are part of a particular machine's attraction. Home micro owners generally leave about one per cent for expansion the first time, after a period of investing with savings and fighting for possession of the money, TV.

Many computers may feel that there is no point building some of the less obvious features — such as ability to connect up to disk drives — into their machine, because owners won't appreciate their importance anyway. But less important but more obviously attractive features, such as a small increase in the number of display characters, may be included even though they bump up the price.

Behind such difficult choices lurks the suspicion that some home micro specifications are drafted by people who don't really understand the needs of the home computer user. It is far easier for a company to set up a home computer system using standard components. If it goes as far as to come up with a special design of its own micro can be forced to look at signal, so the specification may even be fixed before its possibility has been demonstrated.

The best way for companies to avoid trouble is to proceed with caution, and avoid advanced features in the early stages. It may appear that a broad new product will stand the test in pre-empting an early market, but the saving can cost companies dear.

In this case, the basic cause of the problem was offering micro manufacturers an over-optimistic approach. Unjustified capital resources and a limited understanding of the market. Many computers coming onto the home computer field are successes in computing — though even their most amazing models are not unique in methods (there are other micros). Unluckily.

While it continues to proceed in a disorganized way, the micro industry will never realize its full potential. Poor performance in the rest of the market will preclude progress in all the others.

Steve Thompson,  
Systems Engineer  
Marconi

• His space in the page is used all along the price scale, to prevent breakage of the lead insulation. Marconi directly, quoting from Paul Lightfoot, *Home Computing Weekly*, 145 Charing Cross Road, London WC2H 0HT. Please include your acceptance and your interest in computing.

## Sound of the dragon's roar

Dragons can now blow raspberries and sound like a piano, says J.C. R. Licklider, president of a plug-in Sound Expansion Module costing £14.95.

Sound can be created either through a new BASIC command called SOUNDS or by using pre-programmed effects, like explosion, piano, machine gun, car horn, ping and waves.

Other effects include siren, boom, falling bomb, photon torpedo, American song, lullaby, car starting, car passing, crash, thunder and raspberry.

J.C.R. says that writing up a few lines of short code per one SOUNDS command and the up-to-28 separate POKES would be required to do the same without the new module.

Sound can accompany graphics without slowing down the screen display.

The module includes two eight-bit speech/sound ports, activated by the new command,

which can control other devices. J.C.R. says the module also shows how users can program their own sound effects, useful for those with knowledge of machine code.

J.C.R. (Microsystems), 29 Southgate Road, Bournemouth BH6 5AE.

## Game for a bet

Five software titles for the Spectrum have been launched by Microgenics at £4.95 each.

Two of them have two games on the same cassette and one is exclusive to the ZX81.

The titles are Reindeer, Donkey, and BlackJack and Chaps is a tape called Maths Games. Brainstorm, which includes Puzzler, and Spectrum and ZX81 versions of Galapagos.

Microgenics, 230-244 Lavender Hill, London SW11 4LR.

# You could be on our pages

We welcome programs, articles and tips from our readers.

**Programs should, if possible, be computer printed to a width of all characters (use a new ribbon and/or sent on cassette). Check carefully that they are truly free. Include details of what your program does, how it works, variables you have used and hints on conversion.**

**ARTICLES on using home computers should be no longer than 3,000 words. Don't worry about your writing ability — just try to keep to the style in HCW. Articles most likely to be published will help our readers make better use of their machines by giving useful ideas, possibly with programming examples. We will convert any accepted illustrations into finished artwork.**

**TIPS are short articles, and brief programming routines which we can put together with others. Your hints can aid other computer users.**

**Competitive rates are paid.**

**Keep a copy of your submissions and include an SAE if you want them returned. Label everything clearly and give a daytime and home phone number if you can.**

**Paul Lightfoot, *Home Computing Weekly*, 145 Charing Cross Road, London WC2H 0EE.**

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## LETTERS

### Get BT right

Thank you for reviewing my program BT (April 26 May 13). I would just like to make a few points that the reviewer overlooked.

The operations program is only intended to be used once to give you the idea of the game. You have the choice of using the instructions or loading the main program.

The start is twice the size of the version so that when you move to the edge of the screen, the moves scroll across the screen. It has not yet seen any other programs out that mention 'before'.

As it is being 'Well nigh impossible to get into in the fourth stage' I would agree with this on level 1, but the game has more skill levels, and I very much doubt that the reviewer would be able to get through the Autocross fifth stage at that level.

The program also has the facility to save and reload the Autocross and Racers, even. Nigel Streat, Altringham, Cheshire

### My Lynx's colour bar problems

On the 20th of March I bought a Lynx in my local game shop. I quickly caught the Benbowson program as I had talked about with it and tried loading in the demonstration programs, but they would not load.

When I pulled the power lead out of the back of the Lynx the protective black coating came off the socket, and I removed the outer insulation. So I replaced the Lynx back in the shop the same day and they fixed it for me.

Then again, while I was using the Lynx, I noticed that half of purple showed up across the screen. So I took it back to the shop the next day and used it there, but it seemed to be perfect.

I took it home and used again. I tried red, black and white, and colour TV, but the same was still there. I returned to the shop the next day, where they swapped it for another Lynx.

On the day they were no better, but no colour either — just black and white. So I took it back — by this time the manufacturer

### Send your letters to Letters, Home Computing Weekly, 145 Charing Cross Road, London WC2 EEE. Don't forget to name your computer — the best letter could win £5 worth of software. Queries cannot be answered on this page

had thought I was mad. No problems in the shop, so after again they gave me a new machine.

At home the computer was the same. No colour, no black and white. I used this machine in several of my neighbour's TVs — a Sony, two Philips, and a Grundig, but still no colour.

So the next day I returned to the shop and got my money back. So I am looking for an Amstrad 4000 — better luck next time, I hope! Wayne Swift, Bradford.

Steve Gould, of Computer, said: "Doughnuts were some rather problems with the very early models of the Lynx, these have now been sorted out."

"I don't know what was causing Amstrad's problems, but I wish he'd advise us — we're here to help, and all our readers have a handle on Computer and well-queried like that."

### You win some...

I read with interest Artie Computer's letter in issue No. 8, and noted that at least no 1, that very log was caused by Eric Elder in his review of *Stop or Die*.

Congratulations to Mr Elder and your magazine in being, as far as I know, the only ones to have noticed that. It gives me confidence in the standard of your reviewers, and I shall certainly take note of the future reviews you publish.

John Ellis, Bristol

### You lose some

I feel I must correct the press report you did by your reviewer S. H. on the Amstrad's brilliant Tolber program for the 48K Spectrum.

It is not, as the reviewer

points to correctly, a Pro-Am game, but a derivative of the arcade game Berzerk. He claims that "you can only fire in the direction you are moving" — not a program fault at all — it is a feature of Berzerk.

I really do not understand the comment about unnecessary movement. Although I will admit that the playing keys are a little different in Amstrad, I found the program extremely responsive. Tolber remains one of the best programs in my collection.

I would like to add that I have no connection whatsoever with Ellis Software!

Raymond Blaikie, Rayleigh, Essex

### Oric has lost its edge

Although I have no wish to start another BBC vs Spectrum war, as far as all the reviews of the Oric-1 I have read have been concerned it will win the battle with the Spectrum. Not so. I myself have a 48K Spectrum, but recommended a friend to buy the Oric. After using it, he decided to take it back and get a Spectrum instead, although he liked it these chances (and we changed at three times).

The Oric's operating system is better, especially the bypassed channels, but it is more difficult to program. There is no syntax checking, and the report codes are far more confusing than everyone has let on.

The tape lead supplier had a European DIN socket on either end instead of jack plugs. No tape recorder could be found to connect to it, so we ended up scrapping it. DIN socket with jack plugs.

The Oric has no memory expansion, and you have the choice of two loading speeds — amazingly slow and erratic, or

surprisingly fast and inaccurate. Loading at a pace. Now that Amstrad has dropped its price, the Oric has lost the marginal but solid hardware lead it originally had.

A final point — the National ZX Users' Club has now been wound up, so all you ZX owners, a majority of whom, I expect, shall be very upset at a stand in a ZX Meeting. (See p. 161 last month.) John Shatto, London NW1

### Computing by post

ZX Exchange offers opportunities to make informal postal contact with other ZX128 owners in the UK and abroad, and is especially relevant to post readers who live in rural areas, or who have no local user group.

The main objective of ZX Exchange is to promote self-help and amateur program-writing.

Members of ZX Exchange receive the periodic newsletter ZX Broadcast. For further information, contact me at the address below.

Nick Gosselin, 4 Market Cross, Ryhope, Newcastle upon Tyne NE6 5AF

### An interesting addition

As a new 48K Spectrum owner, I've found your magazine to be most helpful and interesting.

I was particularly pleased to find a composed screen program, in issue number four, and have found the following less useful for a more serious application:

400 LET a=1  
400 INPUT "Type ten word please naming";  
"We have a very poor  
402 LET b=a+10  
403 CLS  
405 PRINT AT 2, 0, "YEAR";  
AT 2, 10, "AMOUNT"  
405 PRINT AT 4, 0, AT 4,  
10, 0  
405 LET c=b+1  
405 LET a=a+1  
406 IF c = a THEN GOTO sub  
406 IF INKEYS = " " THEN  
CLS GOTO 400  
409 GOTO 400  
Another Comment, Watford, Herts

## Copyright confusion

After the recent arguments about the copying of software I would like to comment on another aspect of the software law.

On all cassette or tape that you are allowed to lend or re-sell the cassette without the publisher's permission.

By while reading the classified pages of many magazines it is noticeable that the computers are nearly always sold with some software. Surely that is impossible at the amount of money the seller is spending for the machine. This is in fact selling the program, which is illegal.

Since people spend up to £100 on software it seems unfair on them if they couldn't sell it in some way and recoup the computer that software is almost impossible to them.

But it is also unfair on the author that they do not get the chance to sell their cassette to the buyer and they do, I would think, lose money.

The selling of software only adds to the confusion which exists in the copyright law and it's about time it's looked at again and made more clear to everybody.

G.E. Pritchard, Credit

## Save my wortiblog!

I wonder if any of your readers can explain to me why on such a competitive machine as the Lynx you cannot save memory?

I realize that you cannot save programs you actually write, but there's also a lack of any way a personal banking program, data base or address file where a lot of additional data needs to be stored in the form of variables.

May I say I think Lynx have misrepresented their position. I think you will agree if you read them that you are led to believe you can save programs on the Lynx just as you can on the Spectrum or the C64.

P.E. Lantinen, Oyplano, Kent

See *Lynx*, *of Computers*, and  
"The following short extract was  
kindly supplied by Lynx programmers:  
a COKE bar and will save  
variables, *PROJECT* drives and  
PAK and *PAPER* colours."

1980 CODE 12 11 FS 07 12 14  
12 13 23 23 23 23 PC1 AP 16  
AND IBM "program name"  
1980 CALL LTCM (1000),  
LCTM (1000)  
AND IBM "program will run  
from tape".

"Save your programs by using RUM 1000. The program is recorded as tape file. To load the program, use AND IBM "program name". The program will automatically run from the following that commences the CALL ACTN."

"The program will appear in the next edition of the Lynx computer newsletter, which is available free to everyone who needs in their interests such."

## Fighting talk

To all those who have had problems with computer companies who don't deliver on time, here's my advice.

Prove it. Show and say, and if they are not at the end of your road, if they still owe you, send them money back, tell them they are breaking the contract (because they) what a rip they are if they don't pull them socks up you will never sleep again then.

It works — I've tried it. I was ordered number 5 with One International, and I waited almost three months for mine, but after sending them the detail of a letter "expressing my views", which was to go to a computer magazine, they got worried and after 2 days, there was my One.

My last word is don't give in, and if need be, stop all payments if you use a credit card and you get in. Good luck with the argues...

R. Whitfield, Chelmsford, Essex

## Out with the old in with the new

Thank you for including my review *Yester* in your list for October's reviews, but unfortunately it would appear that your reviewer relied on your knowledge of a much older version of this cassette.

For well over three months

*Yester* cassette has replaced the Bomber game with a "Bomber" type game. Also, the ZX81 & 48K versions has been replaced with a much less version for the 16K or 48K. ADD an additional three computer games are included in the 16K cassette.

This cassette is an advertisement in my full page advert in the last issue of *Home Computing Weekly* and is sold at a "value for money" price.

The new *Yester* cassette is available from several computer shops in parts of England and will reasonably well with a fair percentage being sold on "recommendation" of friends. One major difference with *Yester* is that the pictures are the front of the cassette sleeve in boxes in that it shows actual games.

What is unlike the majority of cassettes which are blatantly breaking the Basic Description Act by showing pictures which has no relation to the actual program. I feel one can now prepare to update pictures of space men & robot ships on a sleeve unless you actually contain the graphics that shows.

R. A. Babbins, Old Babbins, Bury, Lancs

Our apologies to Mr. Babbins, but our reviewer is incorrect — he is incorrect in his belief that he was one of the old reviewers of *Yester* that have reviewed up to the offsite newsletter. But, reading *Yester*, nothing seems to have changed, nothing gained!

## A question of character

In your magazine of 12 April you included a character sidebar by Steve Freerley. I was most impressed by the program and tested it and say *well done*.

It worked OK, except for the occasion part which only printed blank. However, I tested the program to June 1980 and 1979. If the CGS1000 is changed over, it works perfectly.

I hope this will be useful to others like myself. I only started this hobby in February this year, and find it very satisfying. Incidentally, I am over 60.  
H.G. Woodman, Moseley, Midlands

## Post work by TI

In these days of long delays and bad service by some companies to their customers, it would like to be known that there is one company in fact who look after their customers — namely Texas Instruments.

Last week I placed TI in with about less of colour on my TI99/4A. There techniques diagnosed the fault as a faulty monitor, and within two days a new monitor had arrived by express Post Service.

What about that for service, per excellence.

W.B. Roberts, Colwyn Bay, Clwyd

## TI program Power

I just wrote to say congratulations for an excellent magazine. Having bought all 10 issues so far, I feel that the *Home Computing Weekly* is worth every penny.

I myself own a TI99/4A, and the series of graphic programs you have for the computer are going to be of help to my own games programming ability (thank you David Gray who wrote the series).

Please keep up the good work — and more improvements and game series please!

Simon Davies, Wellington, Cheshire

## Alteration alteration

I read with interest Mr. Cawson's "alteration" to my character generation program (Letters, issue 10). While his 2000 is indeed a pity since, I feel, he will find that his 2000 makes heavier corrections both unnecessary and inefficient.

Mr. Cawson has also overlooked the fact that the program is for deleting characters, not changing them. The reason for the alterations all that often when you change characters is to use on the screen, in particular " ", which prevents creating the double display.

David Pritchett, Walsall, West Midlands

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"Learning to Use" is a new series of books which introduces newcomers to the most widely used micros in the marketplace.

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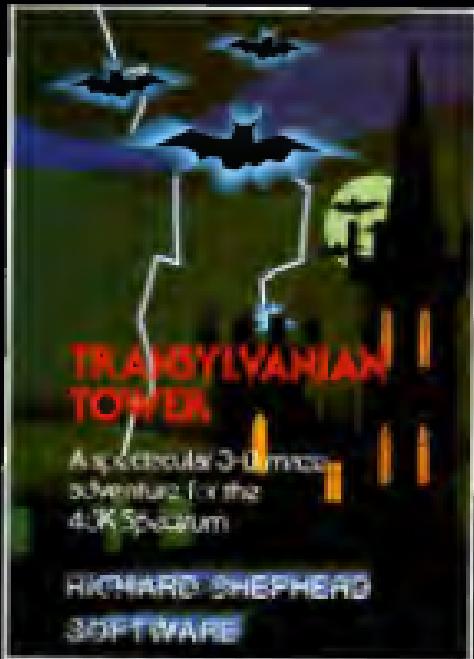
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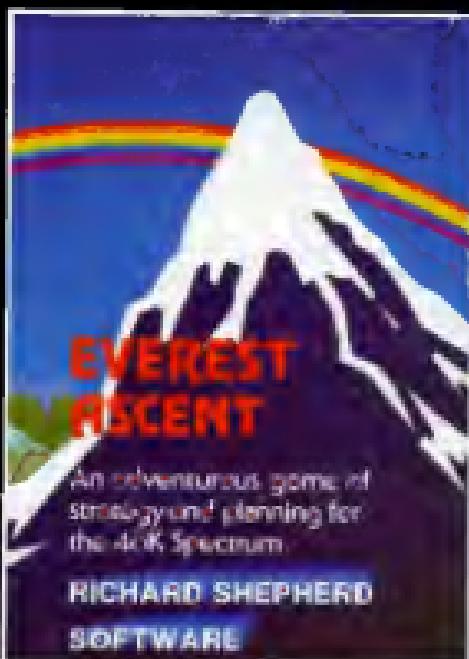
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the programs are being developed in other countries where many may not be aware of the need for protection and may not be prepared to implement a sufficient and sensible protection.

卷之三十一

www.rosatom.ru/atomnauka

# Micro action — and our reaction

**Eyes down for a selection of the latest games to speed up your reactions — and your heart rate. Star ratings and comments from our team of reviewers**

## Escape from Orion BBC 32K £6.95

HayesSoft, Hope College, Warren, Michigan, USA

The "big" games have been continuing, so here's yet another. This action game requires you to fly through space in a plane and save people to Earth.

The central action allows you to shoot which leads to lots of fun. If you shoot, you never fail, and when you can't see where to shoot, you can't see where to shoot. It is the first program I have seen to change the players' behaviour and when used.

The difficulty levels are very good, as you progress from 1 to 10 and 10 to 11. The second half of the game is not as good as the first, as the graphics are not as good as the game, and the music is not as good as the game.

The graphics are not as good as the game, which makes a good game of that bad game, and the sound is not as good as the game. Overall, this is a good game.

**Score: 4 out of 5 stars**

**Comments**  
playability 80%  
graphics 80%  
value for money 80%

## Skyhawk VIC-20 £7.95

Quicksilver, 13 Palmeiro Road, Southampton SO1 4LL

Skyhawk is a defence-type game in which you pilot a plane and try to protect a base from enemy fighter jets. Your plane can travel both left and right at one of three speeds, and take off vertically.

The action takes place over a mostly-green town which spreads outwards in both directions depending on your direction of flight. The enemy strength comes in waves of increasing numbers from either direction, and you can see actual distance and number of enemy on a small radar screen.

The fast and missile supply of your plane are limited — you must replenish them by landing in one of the available landing strips. But the enemy will try to destroy the landing points before you can get there! The use of the game is to supply survivors and destroy as many of the aliens as possible.

Overall a well-made programme which uses multicolour mode and 3D effects. Animation is smooth and effective.

But control of the plane is by joystick only — a bit silly, since most VIC owners do not own joysticks.

I feel too, that the concept looks amateurish. Being invited to protect the planet from invasion is one of the main things I would like to see some brighter ideas than this.

In spite of my reservations, though, this is an addictive and difficult game which represents good value.

A. W.

**Comments**  
playability 80%  
graphics 80%  
value for money 80%



## Damper/ Glooper 16K ZX81 £4.95

Quicksilver, 13 Palmeiro Road, Southampton SO1 4LL

I didn't find the track for the programme very helpful in understanding the game, in spite of the writer's usual annotations, but the game itself was better.

Damper puts you in a car on an alien planet, mysterious black blocks are attacking themselves to the power cables, running around the grid and tapping the city's power supply. Your job is to move a grid runner around the world, damping down the power while avoiding the aliens.

The game loaded and ran with no problems, there are optional instructions displayed at the start of the programme.

There are five "damper" for you to protect, they move in an irregular wave up and down the grid, and if your timing is not present it is very easy to get caught.

The graphics are clear and the controls are quick without being over-sensitive. You have three lives (plus bonus if you become good at the game) and the speed increases as the game progresses.

Score are displayed, and at the end of each game there is a "Hall of Fame" display, the players with the highest scores may enter their names. There is also a facility for saving the game.

I found Damper a straightforward game, without fills, but with enough difficulty involved to prevent the player from becoming bored — everyone I thought I had the knack of avoiding the damper's I managed to get caught.

Glooper is a relative of Quicksilver's Maniacs, but to play and competently produced.

C.C.R.

**Comments**  
playability 80%  
graphics 80%  
value for money 80%



# Bank on your micro to check on your cheques

**How much is in your bank account? Don't wait for a statement, Anthony Gray's program for the TI-99/4A will tell you straight away, and help your budgetting**

Keep an eye on your spending with my bank account program for the TI-99/4A. It allows the initial balance and a series of transactions to be maintained and manipulated.

Each entry consists of an amount, a date, a cheque number and some details.

The amount is assumed as the number of pence — a negative number is a debit and a positive number represents a credit. Dates are entered in the form dd/mm/yy and are checked for validity.

The cheque numbers and details are arbitrary strings of up to 13 and 30 characters respectively; extra characters are discarded. This means new transactions can always be added on a cassette tape.

When the program is run you are asked for the date and the following menu of options is displayed, chosen by pressing the appropriate letter:

- N**ew New date and/or new initial balance
- D**etermine the new balance after transaction
- L**ist details of an account from a cassette file
- O**pen Open details of the account on a cassette file

- A**dd a new entry to the account
- C**hange an existing entry
- R**emove an entry from the account
- S**ort all the entries according to their date
- T**erminate. Quit the program

You should only need to follow the instructions on the screen, but bear in mind the following points:

An entry is specified by its date number (1, 2, 3, ...).

When you want to change an entry, that entry will be displayed along with another menu. Press the appropriate letter for the option you require. When asked a question with a yes or no answer press Y or y for Yes and N or n for no.

The program has been designed to be as robust as possible, however, there are certain errors which cannot be detected and corrected, so take care.

No attempt is made to ensure that only integer values are input as amounts as that would not become too large. Numerical errors of this kind do not cause the program to fail, but will give wrong results.

## How It works

TI-99/4A programs receive data that they display on the screen or message or place there are stored. When the user has entered a command the screen has after each pair of entries has been displayed.

Entered data continues to be entered until the user has entered a **VALUED** representation. A number of pieces of data are entered in a string **VALUED** is used as a delimiting instruction. For example, **VALUED** **123 123 123 123** and **-345 123 123** is stored in **VALUED** **123 123**.

**1000-2000** references to screen, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 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1324, 1325, 1326, 1327, 1328, 1329, 1320, 1321, 1322, 1323, 1324, 1325

## TI-59/90A PROGRAM



TI-99/4A PROGRAM

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3.05 Rev. F Pack for the BBC Microcomputer 0995.00  
This unit eliminates the BBC BASIC in the same way that a memory dump on the BBC is done when using a dual 21496 chip driver for use with BBC BASIC or CP/M (optional) tape drives. The option of using the in range of CP/M software available for BBC BASIC and CP/M is also interesting. The interface supports with the BBC BASIC and CP/M interface. BBC BASIC and CP/M is a powerful operating system developed from CP/M 80.

The addition to the Macintosh microcomputer is suggested. This is a 2.8 MHz with 128 KB RAM card, communicating with the 68000 in the Macintosh through the Fudge. Typically the speed of 1000 c/s in all programs when the two processor system is increased to 10000 c/s compared with a conventional single-processor computer. A third processor with the 16 bit 68000 is already in existence.

**TOPIC: CP24-43** **62788 08 (via VME)**  
This is an enhancement of the BBC microcomputer "Touch and go" package previously published in a magazine. The computer controls a BBC microcomputer programmed to control a 1200 baud serial port. It is based on a Z80A at 4 MHz, as shown in these illustrations. It has a 64K RAM, an 8K ROM, a 16K EPROM, a 16K ROM, and a 1200 baud modem. It is the very microcomputer with the best graphical performance for closed environments in the Public Domain and Telephone Networks, both in the U.K. and the United States.

The TORCH can communicate super directly with another TORCH or with virtually any other type of computer via Parallel port or the Industry standard or Parallel port. A parallel port is a unique and unique type of interface, designed by general purpose computers for public database systems. The parallel port is often used to connect the use of a scanner and

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## REFERENCES

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# They laughed when he set up the company . . .

One funny thing about how many software companies is that despite the high-technology nature of their business, that often we usually see low technology indeed. Psion is an exception in actually looking like a computing company — complete with rows of computers, giving many of rows.

For, unlike most companies in home software which employ freelance programmers working at home, all 16 of Psion's programmers work at its headquarters at 21 Blythwood Mews, near London's Regent's Park.

Dr David Potter, Psion's managing director, sees this as a vital part of creating a company culture. He said: "So far, nobody has ever left Psion. It's not the money — though we pay very well according to computing industry standards — but a commitment that comes from everybody being involved."

"The atmosphere's terrific. Everybody's learning, and they know they're helping to produce the best."

David Potter is clearly proud of the organisation he has set up. "I think we have development facilities second to none. We approach ourselves to be a professional, disciplined outfit. Our purpose is not just to make a fast buck and run."

Psion's development facilities include a powerful microcomputer to which all the programmers have access via terminals on three desks. The microcomputer can be connected to devices like the ZX81, the Spectrum, the BBC, or any other microcomputer that can run Psion's programmes. Psion's programmers can use it to develop software for a new microcomputer before the new machine is even in their hands.

Stored in the microcomputer's memory is a library of thousands of "functions" — machine code routines that act as the building blocks of Psion's programs. "You hold in memory are a range of different 'tools' that programmes can use, just like you'd use a tool box," David explained.

**Psion software has featured prominently in the Top 20 charts of best selling programs for the Spectrum and ZX81, and its name has been linked with Sinclair Research. Candice Goodwin talked to managing director Dr David Potter and learned the secrets of Psion's success**

As well as the development facility in London, Psion has a factory in Belfast which deals with all its tape duplication and production.

But for well-equipped software companies can take heart from the fact that, in terms of the home software market, Psion has been in business for a long time — a whole two and half years, at least.

It was set up by David Potter who, until then, had been an academic, lecturing in maths and physics at the University of Cambridge, then Imperial College, London.

He decided to make the break with academic life because "I could see what was going on in the microcomputer field, and I felt that rather than talk about it, I should do my hands dirty."

He had saved up "a modest amount", and managed to borrow the rest of the money he needed to finance the venture. Now he says: "It was a very speculative thing to have done. I wasn't worried about the money. The difficult thing was to drum up a whole academic career. My colleagues thought I was completely bonkers."

Psion is really three separate companies, one dealing with software, one with hardware and software distribution abroad, and one with hardware development. In the first year, David concentrated on the distribution side, selling just

computers in South Africa where he was born, as well as Zimbabwe, Botswana, Namibia and Lesotho.

Among the machines it was selling was the ZX80, and he became aware of a huge part of the market for good software for the machine. "The original programs Sinclair put out were fantastic."

He started out by distributing software from other companies, including Microgen, around the world. Then in September 1981, perhaps by his "right hand man" and former Imperial College colleague Dr Charles Davies, he started developing programs under the Psion label.



Dr David Potter



Dr Charles Davies

The first programs, including Spectrumsoft for the ZX81 and some Acorn Acorn programs, appeared at the beginning of 1982. Now Picad software producer, writing the best-selling software for the ZX81 and Spectrum and Picad is one of the few companies to have developed a close working relationship with Acorn Research.

David said: "We made an agreement with Sinclair to produce high-quality software for the 81 under the Sinclair label. It was anticipated at the same time the Spectrum was launched, so no present ZX81 owners fear the ZX81 would be copied easily in parallel with the Spectrum."

"We were aware that the Spectrum was coming, and worked with Sinclair to produce versions and a wide range of spectrum software. We developed everything to get licensed ready by July."

David sees picadsoft as a good example of his aim with software in general: "I've opened up the eyes of the user to the possibilities of the machine". One side of the tape underway are the Spectrum and its features, and the other contains a series of games which each show off one aspect of the machine.

Another program he particularly likes is Flight Simulation, currently coding high in the Spectrum software charts. His enthusiasm was shared by the satisfied customer in particular as an RAF squadron leader who wrote in to say how much he had enjoyed playing with the program.

Flight Simulation shows a lot of programming techniques such as VDU ID, another basic feature VU-3D is the first program to allow users to produce three-dimensional models of solid objects, complete with perspective shading, on the Spectrum. It took several programmes five and half months to complete — the equivalent of one programmer working for nine and half years — and uses the same principles that are applied in solid modelling systems for much larger computers.

Another Spectrum firm to hit the market soon is a version of Scrabble, so which programmers were plotting the finishing touches when I visited. The program will have a vocabulary of thousands of words, and it's



Picad programmers at work together

up to four players — which is studies any combination of human and computer will be possible. If you so desire, you can wage four computer opponents play rock-paper, all on different levels of play.

Most of Picad's 16 programmers have computer science or math degrees, and there are PhDs. The odd one out is Stephen Kelly, who is now just 20, and left school at 16 with few qualifications.

He had to leave a job in Carr's warehouse after having his back, and was unemployed for two years. Or perhaps unemployed in the flying field, since he taught himself how to get hold of a ZX81 and learned to program in machine code from scratch.

The two programs he sent in to Picad impressed David, and when Stephen phoned in response to one of Picad's ads for programmers, David invited him to London the next day. He's been with the company ever since. David says of him: "He's amazing to watch him. He's a kind of genius in his own way."

Picad doesn't use any freelance programmers. "We like to co-operate in developing software, because we think we can come up with more original ideas that way. Secondly I think the discipline of working in teams is important. We have three or four people working on one program, a pro-

ject leader and three young people."

With a turnover "approaching over £1 million", Picad seem to be doing something right. "The lesson, we will more software than anyone", said David.

"We shipped 100,000 last July."

As head of a burgeoning software business, does he ever regret leaving the academic world? He said: "Not especially. I've never had so much fun in my life."





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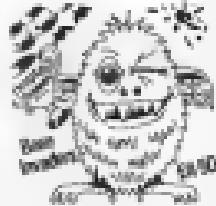
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## BBC PROGRAM

2000ENDPROC  
201  
4000EFFPROC\_SELECT  
4100DATA PRINTTAB=0,120CHR\$132,CHR\$137,CHR\$133,AB,  
4200FORMAT=870C  
4300PRINTTAB(120)=111111,120 PRINT(AB,120,120,120,120,120,  
4400FORMAT=12,120CHR\$131,CHR\$137)DISPLAY,"Please confirm selection - Y/N ?"  
4500+GETS  
4600ENDPROC  
470  
7000EFFPROC\_Countdown  
7100PRINTTAB(120)=120 PRINT(AB,120,120,120,120,120,120,120,120,120,120,120,120,  
7200+GETS YOUT AB1  
7300OUT(11,12,13)  
7400FORMAT=120\*120\*120\*120\*120\*120\*120\*120\*120\*120\*120\*120\*120  
7500FORMAT=120\*120\*120\*120\*120\*120\*120\*120\*120\*120\*120\*120\*120\*120  
7600FORMAT=120\*120\*120\*120\*120\*120\*120\*120\*120\*120\*120\*120\*120\*120  
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7900FORMAT=120\*120\*120\*120\*120\*120\*120\*120\*120\*120\*120\*120\*120\*120  
800  
1100EFFPROC\_AB2  
1110LABEL  
1120PRINT " "CHR\$132,CHR\$137,CHR\$133," Are you ready then... ?"  
1130PRINT(11,12,13)  
1140SOUND1=10,80,12-SOUND1=10,77,10  
1150SOUND1=10,80,10  
1160PRINT " "CHR\$131,CHR\$137,CHR\$133," Set time to 'PLAY'... "  
1170PRINT " "CHR\$131,CHR\$137,CHR\$133," Press spacebar to 'CHAIN' program"  
1180+INKEY(1)-97)--1170+IFELSE1180  
1190 ENDPROC  
1200EFFPROC\_intro  
1210LT=20  
1220FORMAT=120\*120\*120  
1230ENDPROC  
1240  
1300EFFPROC\_AB3  
1310FORMAT=870C FORMAT=8702  
1320FORMAT=120\*120\*120  
1330FORMAT=120\*120\*120  
1340ENDPROC  
1350  
2000DATA INDEX OF THE GAME  
2010DATA BASIC + INDEX INDEX INDEX  
2020DATA INVADERS .1200, 1200  
2030DATA VOYAGER .1200, 1200  
2040DATA HOOLANDER .1200, 1200  
2050DATA PTERODACTYL .1200, 1200  
2060DATA BLAST .1200, 1200  
2070DATA DEMONSTERS .1200, 1200  
2080DATA OBSTACLE .1200, 1200  
2090DATA DRUGEN .1200, 1200  
2100DATA HOME .1200, 1200  
2110DATA UDEVADER .1200, 1200  
2120DATA 3D-SURFACE .1200, 1100  
2130DATA ELLIPSE .1200, 1200  
2140DATA HOOLANDER .1200, 1200  
2150DATA POLYDOM .1200, 1200  
2160DATA SQUARE .1200, 1200  
2170DATA CHOBOS .1200, 1200  
2180DATA SPINAL .1200, 1200  
2190DATA INVADERS .1200, 1200  
2200DATA E .1200, 1200  
2210DATA S .1200, 1200  
2220DATA SUNNY .1200, 1200  
2230REM SET PAGE=TOP+5400 TO RESERVE SPACE FOR INDEX BEFORE 'CHOBOS'



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Software

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Game design and graphicsware: R. Lowry

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Defend the Federation Fleet from the endless suicide pods of the alien battlefleet. Use your hyperdrive, hyperspace and hyperspace to destroy the evil enemy ... but watch your fuel, bonus points and fuel can blowoff! How long can YOU hold out in this fast action game by Anthony Pittman

## THE MISSING LINK

## Asian Motoids - for the BBC model B

"Where am I?" A reasonable question, but the shock answer is only the first in a series of catastrophes that might be ahead ... A bolt of lightning stuns your eyes as the monster weakens you from sleep-sleep, only to tell you the worst!

Your interstellar cruiser has been invaded by the evil race known as the Motoids - even worse, you are alone!

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Bandit ... that's the only way to describe it, try your luck against the meanest trash machine in the universe. 1,000 credits and you leave the bank, it's not easy, but then, you wouldn't expect it to be would you?

You can almost feel your pocket getting lighter in this full features trash machine game. Based on a real 20 centilitre per sec machine, this superb simulation displays excellent high res colour graphics and realistic sound, joystick hold and badge facilities, with 80 moves, most vicious gamete feature in the world! without doubt, the most computer addictive trash machine on the market! Specified for people with deep pockets and money to burn!

Game design and graphicsware: R. Lowry

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Our panel look at new games, at a range of prices, for the VIC-20. This is what they think of them...



### Scramble £7.95

Siemens, Royal London House,  
198 Deansgate, Manchester M2  
3AE.

In the fast-moving space-on-a-chip game, you must fly your light-speed starship over an enemy-occupied planet, shot and destroy temporary and mobile targets. Control is via keyboard or joystick.

Joysticks are built up in attack, but you are armed with a forward fire cannon and also have a bomb load to use. Level-of-attack is communicated to an on-screen ground referee, and an automatic gate will be triggered with the space key. Instead of enemy tanks, in

work 50 points (20 in a bullet on the ground), but over 700 and over 1000 are worth between 100-300. A further 10 points are added for each time you penetrate the wall.

The graphics, colour and sound structure are excellent, but the sound effects are spot on in microcosm fashion. Two factors that prove we that it is taken and keyboard control (C1 and C2) to remain the game, and there is no high score record kept.

But overall, a fast-paced version of a popular game.

instructions 90%  
playability 95%  
graphics 90%  
value for money 90%



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## VIC-20 SOFTWARE REVIEWS



### Pharaoh's Tomb VIC-20 plus 16K £6

Acorn, 26 Belcombe Gardens, Horley, Surrey

This is a purely graphical adventure, in which you use the keyboard to control a little man who uncovers a pyramid. For various objects.

The game takes him into a series of maze-type rooms in which any nervous human who dares to suggest his strength instant death after lurking in the form of different traps.

Many adventures are optimised for the use of joystick or 16-bit version of the game for the computer — the only time and a word is when your death is deserved. I would have liked to have seen more messages telling you what the objects were and what they should do for you. Similarly, whereas in most adventures you can anticipate a hazard and sometimes avoid it, in Pharaoh's Tomb you are liable to be bumped off at any time. Instant death without warning is so frustrating — especially when you have a long game to ahead.

Very good and colourful mode graphics, but overall a rather frustrating and unsatisfying game.

A. M.

### The Wizard and the Princess £5.95

Melbourne House, Globe House, Bessborough Road, Cheltenham, Glos GL1 2TA

This program will show you the extent of the possibilities for the VIC 20, both in terms of graphics and in terms of some beyond the memory limitations of the standard machine. This begins the most accompanying this far-part: "Adventure". Fortunately the program itself is better written.

In chapter one you wander slowly through some pretty country-side, looking for the wizard's castle. It is rather hard to find it, and patience is rewarded with a "You shift that castle" message, on doing so you are propelled into chapter two. Here you are expected to make a particularly hideous dragon in the theme, and ungraciously stay it to see

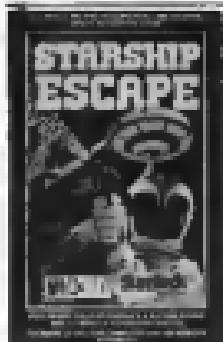
Chapter three is something else again, a three dimensional maze of great complexity and size. The program even suggests that you draw a map as the labyrinth is explored, and a good idea this is. The maze is very difficult to solve even so, but enjoyable all the while.

Chapter four takes into consideration with a twist for a Melodeon "puzzle", as the program has to do various forms of the search's castle, and the program goes on on a low note with a very unimpaired "poker" on the cell at the end of the game.

Good use of programmed graphics is not enough — only the 3D & 2D maze ridiculous the adventure, but without it it does Melbourne House a clearly aware of the great unearthing potential of adventure games in progress, but consequences is still and standards high. Higher than this.

T. D.

instructions	95%
playability	70%
graphics	95%
value for money	80%



### Starship Escape VIC-20 plus 16K £9.95

Bantock, Royal Leamington Spa, Warwickshire CV32 4JL

This game is a hybrid — a graphical adventure which requires the fast reactions associated with arcade games.

You are the pilot of a space ship which has been captured by an alien craft. Your ship has been damaged and the powers

distributed throughout the ship. Using either joystick or keyboard, you must wander through the ship, find the power, collect them so that an not and reasonable them.

There are a number of hazards including acidoids, robots and space snakes in the rooms, all which are determined to stop you surviving. As you enter each room you are given an armful tools and must either avoid the enemy using caution or shoot it with your laser. Not all enemies, however, can be shot.

The search starts at the cockpit and you are assured that if you are captured by one of the opponents, the robot, or the Doctor of Dr WHO fame, will help you in your task.

The game uses good graphics and is fast and frantic. A high degree of agility and good tactics are required to avoid the enemy. On the whole an excellent game which should appeal to most computer enthusiasts.

A. W.

instructions	95%
playability	95%
graphics	95%
value for money	80%



### Krazy Kong VIC-20 plus 16K £6.00

Acorn, 26 Belcombe Gardens, Horley, Surrey

Since the arcade version of this game is one of my favourites, I reviewed this tape with interest. I was not disappointed.

In case you haven't played the arcade game, it works like this: You take the role of a small man trying to rescue a kidnapped monkey from the gangsters.

The game is lurking at the top of a series of platforms linked by ladders, and your man must try to get to the top.

He also has to avoid being crushed by barrels rolled down the platforms by the gangsters, or smash them using small molotovs he picks up on the way. He can also set extra points by collecting bananas or apples from the ground.

This is a faithful copy of the original and, bearing in mind the limitations of the VIC, uses excellent multi-colour graphics.

If you reach the top of the screen, a new configuration of platforms is shown. Screen three includes an elevator which, due to buyer's remorse, I'm not sure which, I was unable to move. So beyond this screen, I can't comment.

Adventure is smooth and fast with either joystick or keyboard control. A standard ball of fire is available for high scores.

A. W.

instructions	80%
playability	100%
graphics	90%
value for money	90%







# Rats, spiders, ghosts and androids — the latest Spectrum releases

## Caterpillar £5.95

CBG Software, 10 Westfield Close, Tickhill, Doncaster, South Yorks DN11 9LA.

A blue spider, a green flea, a red scorpion and a purple caterpillar set your teeth on edge in this game. Try to destroy the caterpillar as fast as it can as it crawls up your through a field of mushrooms. If it reaches your goal, you are dead.

Each time the caterpillar reaches a mushroom it moves one stage lower — and if the mushroom is red, it drops straight to the bottom of the screen.

While all this is going on, a green-fingered caterpillar is trying to crawl on you, while clearing the mushrooms from the bottom of the screen. If it succeeds, the flea comes bursting down, leaving a trail of mushrooms behind it.

Points are scored for destroying anything on the screen except yourself in this highly complicated arcade game — which could be highly enjoyable too, were it not for the limitations of the Spectrum's keyboard.

A good idea for a game like this, but the program doesn't provide for user. Masters aren't improved by the keys chosen for control. With one hand on the cursor keys and the other on the bottom row for timing, you could not possibly manage even the simplest keys up. A good game, let down by its hardware.

N.W.

atmosphere	85%
playability	65%
graphics	80%
value for money	75%

★ ★ ★

You face a fearsome set of foes in these new games, on sale now for your Spectrum. Our reviewers return from the fray to hand over their star ratings

## Cyber Rats £5.95

Silverstone, 20 Orange Street, London WC1H 1ED

In this derivative of our old friend Centipede, deadly rats advance on you from the top of the screen. If they catch you, you lose a life (you have three to start with).

The rats appear at the top right and top left of the screen, and travel across until they reach the other side or encounter a wall of glass. At this point they jump down to the row below.

You can move left, right, up and down, and fire in the direction they advance (you see them for this, so you can't miss them). If you manage to clear the wall, another wave appears.

Every now and then an extra

invader rat will drop down to add variety.

No problem loading, and you can play either from the keyboard or from an AGP or Kompatex joystick. One or two players can take part, each player's score added when he/she loses a life. The highest score is recorded, but not the player's name.

Reasonably interesting, but unexceptional graphics, and lacking the addictive quality that has made similar games so successful. Disappointing for the price.

atmosphere	50%
playability	75%
graphics	50%
value for money	60%

★ ★

## Muncher £5.95

Silverstone, 20 Orange Street, London WC1H 1ED

Another Centipede-type game in which you try to avoid food ghosts by running round a maze. The two brownish-brown mithraspheres avoided various as they do their pattern: when each other it is dinner.

Each time you clear the energy dots and refresh the maze, you and the ghosts speed up. A bonus that increases from time to time is the removal of the most mithra if you can, the score points are worth the trouble!

The program loads every time and the difficulty levels progress steadily, so that even a newcomer to the game can get

some feeling of achievement. A high score is recorded, but not the name of the high-scoring player.

Muncher is let down by its instructions, which give the wrong control keys. Start a new game, use S and H, use P, move you down.

Fast graphics, especially considering how small the ghosts are. An addictive game, and a good introduction to the "munch, chomp and gobble" brigade. But with many similar games on the market, I would have liked to see more variety and originality.

atmosphere	50%
playability	80%
graphics	70%
value for money	75%

★ ★ ★

## Orbiter £5.95

Silverstone, 20 Orange Street, London WC1H 1ED

Immediately recognisable as a version of the popular Defender arcade game, Orbiter incorporates many of the features of the original, such as Landers, Masters, and the usual score display of the overall battle area.

Since these features are not mentioned in the brief instructions, it was only after consultation with a confirmed Defender fan that the full scope of the game was understood.

It then emerged as quite interesting, if slightly frustrating game, notably as the fact that the score message kept changing colour, and in some colours was quite illegible.

The Orbiter fan remarked that it was difficult, if not impossible, to position the shooting ship so that attacks from the sea could be directed in time to take evasive action, but that could be just as true of the fan.

The progress loaded without difficulty, though the instruction to CLEAR the screen before loading was a little surprising, and being mixed with other machine code programs. Seven control buttons were available, much controlled by a separate group of keys on the keyboard matrix.

Basically a good game, which would nevertheless beoric from slight inaccuracy and its adequate originality.

N.W.

atmosphere	50%
playability	80%
graphics	70%
value for money	75%

★ ★ ★

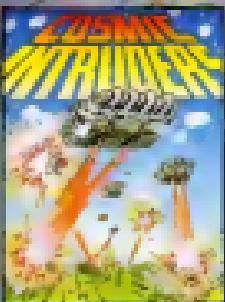
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# Let your Dragon loose with depth charges

Subchase puts you in charge of a ship with a mission to hunt submarines and destroy them with depth charges.

The left and right cursor keys control the ship's movement and the **Q** key drops the depth charges.

You are armed with 10 depth charges and if you drop any and miss that depth charge is, of course, lost. But if you hit the sub your charges explode.

And there's a bonus of two extra depth charges after you've destroyed a submarine.

To make the game more interesting, every time you hit a sub it increases speed.

Under many games of this type, when you drop a charge the sub and ship movement isn't halted — it does slow slightly — so this has to be taken into account while playing.

Exploding the booby traps should not cause many problems. The introduction and text may need slight spacing as you don't have had a word on your home computer, so the line below. These numbers are lines 40-41 and 50-51.

Instructions appear when

**Not enough Dragon 32 programs are being published, said Ian Sellman. So he sent in his own simple Subchase game**

you run the program and pressing a key shows which key to use. The submarine remains on the screen for about eight seconds at the high-resolution screen it is set up.

When this appears you see the ship moving at the bottom of the screen. The ship doesn't appear until you move it, that is, those randomly on the surface.

The place where you run out of depth charges and there's a submarine on your nose. Average is 15-20 sub sinks.

The only place reached this

time, but I haven't yet had a lot of time to play it.

## How it works

10-110	title page
140-149	submarine screen
200-249	no ship/no screen
250-262	submarine
270-282	movement and
283-294	ship movement
300-311	depth charge
320-342	drop routine
340-353	for review
350-363	END routine

## Hints on conversion

This program isn't easy to convert as it uses high-resolution graphics. So if you don't own a Dragon or a Thirty Colour Computer, I suggest you completely rewrite lines 220-249, 302, 342, 360, 380, 400-440 and 720-820.

For the travel code insert a conversion, here are a few:

■ GET and PUT take a section of screen and puts it back anywhere on the screen.

■ The PRINT #1 command prints at any of 112 points on the screen, which is a matrix of 32 by 16 display.

■ The Dragon doesn't require the password, LIST, so if your machine does you will have to invent such an emergency password.

■ ASCII codes 8 and 9 are the codes for the cursor keys on the Dragon.

■ This program takes up just over 12.5K of memory, but most of this is used by the graphics.

DEAGON 32 PROGRAM

```

650 PRINT#1496 DE 2,2,3
655 WENDE=18
670 IFDE=10 THEN RETURN
680 FORM=027
690 IF A28=0 THEN GOTO70
700 NEXTD
710 NEXTI
720 D1=0:W1=0:R1=0
730 P1=PV1:T2=1:PV2=0:T3= PV3=0:T4=PV4:T5=0
740 PRODL2=3:SQRLEN=0
750 FORM=1,T1=0
760 FORM=0,T2=0
770 GURD1,R
780 GOURV188,2
790 NEXTT,P
800 PULS
810 S=0,I=1
820 PI=PC+1
830 PV0=0,I=1:SCREEN1,M
840 PV0=0,I=1:M
850 D1=0:RETURN
860 CLR
870 PRINT#129,"YOU HAVE RUN OUT OF DEPTH"
880 PRINT#129,"YOU DONT DESERVE TO BE CAPTAIN"
890 PRINT#129,"YOUR SHIP SUNK MORE SHIPS THAN ANY OTHER IN THE FLEET"
900 PRINT#129,"YOUR PERFORMANCE WAS ONLY AVERAGE"
910 PRINT#129,"YOUR SHIP SUNK MORE SHIPS THAN ANY OTHER IN THE FLEET"
920 PRINT#129,"YOU DID WELL"
930 PRINT#129,"YOUR SHIP SUNK MORE SHIPS THAN ANY OTHER IN THE FLEET"
940 PRINT#129,"SHOULD YOU LIKE ANOTHER GO-round?":INPUTM:IFM="Y" THENGOTO129

```

CHARACTER, YOU WANTED?"

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### DRAGONWARE

The tools of the Dragon Developers are packed with the latest range of Dragon 32K software and peripherals available in the UK. Send for our "Dragon Developers Catalogue" and tell the myth that the front tools program". (Catalogue 32p, reasonable cost - free to C16 Members).

### THE DRAGON DUNGEON

PO BOX 4, ASHBURY, DORSETSHIRE DE6 1AD  
TEL ASHBURY 4429









# QUICKSILVA

Author: Mark O'Farrell  
Software: Nine 16K  
Processor: Z80  
Memory: 16K  
Sound: 8 bit  
Graphics: 256  
Video: Full resolution  
Control: Joystick  
Controller: Up/Down Left Right  
Speaker: Polyester  
Unit: Volum. Edge Control with lead  
Action: Racing  
Author: Ian Andrew

## ATARI 400/800 MAGIC WINDOW

Define characters on 8x8 grid, save to tape. Load from tape. Present merge character sets into existing programs. Hint & Idea: 12 line character manipulation. Mirror rotate, invert, left, right, up, down, move, delete. Paste into whole character set. Also works in colour mode. Excellent, inexpensive example. 16K RAM or more. Author: M. Walker

Computer Quick Silvia introduces 2 new programs. MINED-OUT and a computer version of the computer game for the Oregon and 16K character generation program for the Atari 400/800. MAGIC WINDOW!

## BBC GAMES MUSIC PROCESSOR

Excite your BBC Music processor to its limits. Features: Full assign button, sixteen 16K memory locations for recording, mixing, editing and sound effects, plus 4 channels. 120 levels, 100000 envelope decay, 100000 note envelope decay. Ready made music files included. Author: Andy Williams. For the model A or B.

**PROTECTOR**  
Protectors: Robot intruders who kill on contact, move along LIFO. Monsters increase in size as game progresses. Hits pixels every 10000 pels. Hyper-space function. Full colour three channel sound. Joystick control. For the model B with 16K + joystick. Author: Andy Green

**WIZARD**  
The terrible wizard, beautiful maidens are being sacrificed by an evil King. Can you be their saviour fighting for handfuls of evil demons armed only with your wizard staff and magical powers. A most colourful and original game with its own colour graphics and full sound. Author: A. R. Buckley. For the model B with 32K.



## MINED-OUT QUICKSILVA



Please send me the games as listed:  
Title:  Price: £14.95  
 Price: £15.95  
 Price: £16.95

Quicksilva  
Mined Out  
Protector  
Wizard  
Oregon Game  
Mined Out  
Atari 400/800  
Magic Window

Chiquita  
P.O. Box 4040, Chichester

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

Postcode: \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_